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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/080,674	02/25/2002	Chikara Imaizumi	01306.000075	8177

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EXAMINER

LEE, SUSAN SHUK YIN

ART UNIT PAPER NUMBER

2852

DATE MAILED: 04/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/080,674	Applicant(s) IMAIZUMI ET AL.	
	Examiner Susan S. Lee	Art Unit 2852	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 November 2003.
 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) ☒ Claim(s) 1-7 and 11-18 is/are allowed.
 6) ☒ Claim(s) 8-10 is/are rejected.
 7) ☐ Claim(s) _____ is/are objected to.
 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Upon reconsideration of the claims, the previous indicated allowability of claims 9 and 10 is hereby withdrawn in view of the newly found prior art to Krause et al. (4,031,466), Dowling et al. (6,308,140), and Shii (Japan, 445).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 8 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Shii (Japan, 445).

Shii discloses a rotary body 22; a sensor with light emitting part 23 and light detecting part 24 for allowing light to pass or not pass through holes 25 and 26 of rotary body 22. Since the holes 25 and 26 intersect through the axis of rotary body 22, they read on the instant invention's "notch or perforation formed on an axis of the rotary body". Note abstract and Figs. 2 and 4. The speed of the rotation of shaft 22 is detected by the sensor 23, 24 by the light emitted by part 23 passing through the holes 25 and 26 and detecting the light with part 24. The sensor 23, 24 is located outside of shaft 22 and is attached to element 21 as shown in Fig. 4. This element 21 reads on the instant invention's axial bearing.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krause et al. (4,031,466) in view of Dowling et al. (6,308,140).

Krause et al. discloses an apparatus 10 for measuring the speed of rotation of a shaft 13 of a motor 15. The apparatus 10 includes an optical sensor probe 12 that includes a light source L1 which reads on the instant invention's light emitting portion and a photocell P1 that reads on the instant invention's light receiving portion. A narrow strip of reflective tape 27 disposed on the end 13' of the shaft 13 provides a contrast in reflectivity relative to the material of the shaft 13. The photocell P1 responds to the difference in reflected light as the shaft 13 rotates, to change in resistance for each revolution of the shaft 13. Note column 3, lines 42-68.

Krause et al. differ from the instant invention by not disclosing a notch or perforation.

Dowling et al. discloses it is old in the art to use reflective tape or notch on rotating shafts to provide a once-per-revolution phase reference and speed indicator. Note column 1, lines 32-42.

Therefore, because these two speed sensing elements on rotating shafts were art-recognized equivalents at the time the invention was made, one of ordinary skill in the art would have found it obvious to substitute reflective tape for notches on a shaft of a rotary body to help sense the speed of rotation of the rotary member. To use notches on a shaft instead of reflective tape would be more permanent since the reflective tape can come off after a long time of usage.

Allowable Subject Matter

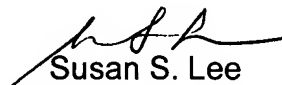
Claims 1-7 and 11-18 are allowed over the prior art of record.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Hokari (5,802,422), Saeki, Yokota et al. (Japan, 353), Kobayashi et al. (Japan, 946), and Hokari (Japan, 385) disclose art in detecting speed of belts in image forming apparatuses. Sotooka et al. disclose art in an optical tachometer for discriminating rotation speed and rotation direction.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Susan S. Lee whose telephone number is 571-272-2137. The examiner can normally be reached on Mon. - Fri., 10:30-8:00, Second Monday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Art Grimley can be reached on 571-272-2136 or 571-272-2800 (Ext. 52). The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Susan S. Lee
Primary Examiner
Art Unit 2852

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